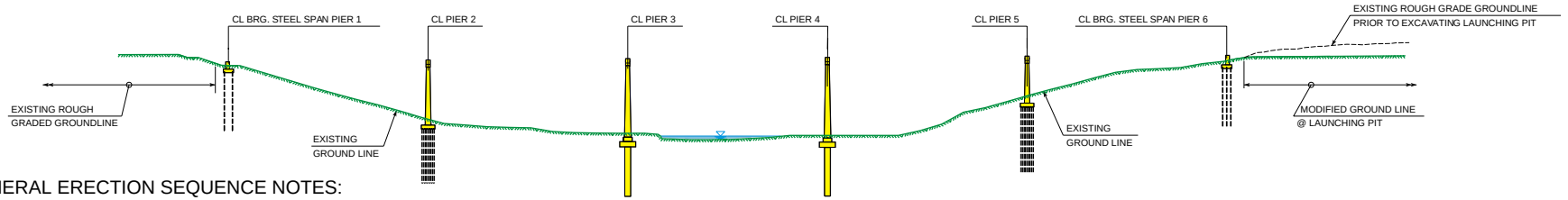



# GENERAL ERECTION SEQUENCE NOTES:

THE FOLLOWING ASSUMPTIONS WERE USED TO DEVELOP THE ERECTION SEQUENCE.

1) ALL EXISTING GROUND LINES MODIFIED BY THE CONTRACTOR TO FACILITATE CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO EXISTING GRADES UNLESS APPROVED OTHERWISE BY THE ENGINEER.

2) THE CONTRACTOR MUST CONSTRUCT THE BRIDGE WITHIN THE GUIDELINES INDICATED ON THE ENVIRONMENTAL CONTROL PLANS AND IN THE SPECIAL PROVISIONS. DURING CONSTRUCTION, THE CONTRACTOR MAY PROPOSE ADJUSTMENTS TO FACILITATE CONSTRUCTION ACTIVITIES. THESE ADJUSTMENTS SHALL BE PER A CASE BY CASE BASIS AND SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

3) ALLOWABLE CONSTRUCTION ACTIVITIES SHALL BE RESTRICTED DURING CERTAIN TIMES OF THE YEAR, AS NOTED IN THE SPECIAL PROVISIONS.

4) THE SUGGESTED ERECTION SEQUENCE ASSUMES THAT THE LAUNCHING OF THE BRIDGE SUPERSTRUCTURES SHALL OCCUR FROM THE EAST (BEHIND PIER 6) WORKING TOWARDS THE WEST (PIER 1). AT THE CONTRACTOR'S OPTION, THE BRIDGE MAY BE LAUNCHED FROM THE WEST (BEHIND PIER 1) TOWARDS THE EAST (PIER 6) HOWEVER IT SHOULD BE NOTED THAT THE MOST SEVERE WINTER CONSTRUCTION RESTRICTIONS REVOLVE AROUND THE BALD EAGLE'S ROOSTING AREA IN THE DRAW SOUTHWEST OF PIER 1 AS SHOWN ON DESIGN SHEET /A55/ AND NOTED IN THE SPECIAL PROVISIONS.

5) THE SUGGESTED ERECTION SEQUENCE ASSUMES THAT THE BRIDGE SUPERSTRUCTURES WILL BE ERECTED SIMULTANEOUSLY BUT LAUNCHED INDEPENDENT OF EACH OTHER (I.E. THE 4-GIRDER SYSTEM OF THE EAST BOUND LANES SHALL BE LAUNCHED ONE SPAN AT A TIME SEPARATELY FROM THE 4-GIRDER SYSTEM OF THE WEST BOUND LANES). THE CONTRACTOR, AT HIS OPTION, MAY REVIEW THE CONSTRUCTION SCHEDULE, RE-USE OF ROLLERS, AND AVAILABLE WORKING ROOM FOR STEEL ERECTION IN THE LAUNCHING PIT TO DETERMINE WHETHER THE LAUNCHING OF ONE 4-GIRDER SYSTEM COULD BE COMPLETED PRIOR TO LAUNCHING THE OTHER.

6) THE SUGGESTED ERECTION SEQUENCE ASSUMES THAT THE PERMANENT POT BEARINGS ARE POSITIONED ATOP THE PIERS PRIOR TO THE LAUNCHING OF THE GIRDERS. THE CONTRACTOR MAY PROPOSE ALTERNATE SEQUENCES OF INSTALLATION PROVIDED THE PROPOSED SEQUENCE CLEARLY INDICATES THE METHOD AND DETAILS FOR TRANSFERING LOADS FROM THE TEMPORARY BEARINGS TO THE PERMANENT POT BEARINGS.

7) A REACTION FOUNDATION BLOCK HAS BEEN SHOWN TO FACILITATE THE "PUSHING" OF THE GIRDERS THE LAUNCHING OPERATIONS. AN ANTICIPATED TOTAL MAXIMUM HORIZONTAL REACTION PER 4-GIRDER SYSTEM OF 3650 kN (410 TONS) HAS BEEN ASSUMED FOR DESIGN.

NOTE:
AT THE CONTRACTOR'S OPTION THE GIRDERS MAY BE "PULLED" AGAINST PIER 6. PROVIDED THE CONTRACTOR CHECKS THE COMPONENTS OF PIER 6 FOR OVER-STRESS DUE TO THIS OPTION AND SUBMITS COMPUTATIONS TO THE ENGINEER FOR REVIEW.

8) A LAUNCHING SKID WAS UTILIZED TO LIGHTEN THE LEAD CANTILEVER SPAN AS WELL AS TO GUIDE THE DEFLECTED STRUCTURE OVER THE TOPS OF PIERS. THE CONTRACTOR MAY PROPOSE ALTERNATIVE METHODS OF CONTROLLING THE DEFLECTION OF THE LEAD CANTILEVER.

9) ALL CONCRETE FORMS AND REBAR ARE ASSUMED TO BE INSTALLED ON GIRDERS PRIOR TO LAUNCHING EXCEPT FOR THE FIRST 44 METERS OF SPAN 1. NO ADDITIONAL DEAD LOAD EXCEPT FOR THE GIRDERS AND THE ASSOCIATED BRACING ARE ASSUMED FOR THE FIRST 44 METERS OF SPAN 1.

10) THE ANTICIPATED MAXIMUM VERTICAL GIRDER REACTION DURING LAUNCHING OF 2450 kN (275 TONS) HAS BEEN ASSUMED FOR DESIGN OF THE PIER STRUCTURES AND LAUNCHING FRAMES.

## STAGE - 1

1) BEGIN EXCAVATION OF LAUNCHING PIT.

NOTE:
THE CONTRACTOR SHALL IMMEDIATELY IMPLEMENT TEMPORARY DRAINAGE AND EROSION CONTROL MEASURES WITHIN THE LAUNCHING PIT AS NOTED ON DESIGN SHEET 72 (SUPERSTRUCTURE CONTRACT) AND IN THE SPECIAL PROVISIONS. SEE DESIGN SHEET 73 (SUPERSTRUCTURE CONTRACT) FOR PHASE 2 "TIE IN" TO PERMANENT DRAINAGE SYSTEM.

THE CONTRACTOR SHALL COORDINATE THE STORAGE OF THE EXCAVATED MATERIAL RIGHT OF STATION 352+00.000, WITH THE ENGINEER.

2) INSTALL AND PROTECT PERMANENT POT BEARINGS, TEMPORARY ERECTION FRAMES AND ROLLER BEARINGS ON PIERS 1 THRU 6.

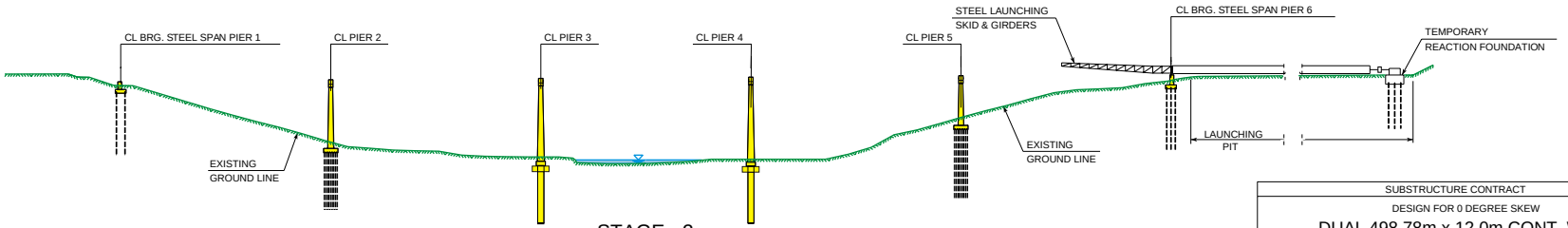
NOTE:
DO NOT GROUT IN ANCHOR BOLTS FOR PERMANENT POT BEARINGS.
MAINTAIN WATER TIGHT PROTECTION OF ANCHOR BOLT WELLS.
POT BEARINGS ARE NOT TO BE USED DURING LAUNCHING OPERATIONS EXCEPT AS NOTED IN THESE PLANS.

THE SUGGESTED ERECTION SEQUENCE SHOWN REPRESENTS THE SEQUENCE OF CONSTRUCTION ASSUMED IN THE DESIGN OF THE GIRDER SYSTEM. THE CONTRACTOR MAY PROPOSE AN ALTERNATIVE SEQUENCE WITHIN THE "DETAILED ERECTION SEQUENCE".

WHETHER THE CONTRACTOR PROPOSES AN ALTERNATIVE SEQUENCE OF CONSTRUCTION OR ONE SIMILAR TO THAT SHOWN ON THIS DRAWING, THE CONTRACTOR SHALL PREPARE A "DETAILED ERECTION SEQUENCE", INCLUDING COMPUTATIONS AND DETAILED DRAWINGS, TO BE SUBMITTED TO THE ENGINEER FOR REVIEW AS PART OF THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ERECTION SEQUENCE SHOWN IN THE AGREED UPON "DETAILED ERECTION SEQUENCE".

NOTE:
THE ERECTION SEQUENCE SHOWN ON THIS SHEET HAS BEEN INCLUDED IN THE SUPERSTRUCTURE CONTRACT. WORK NOTED ON THIS SHEET HAS BEEN PROVIDED FOR INFORMATION ONLY AND IS N.I.C.




## STAGE - 2

1) CONSTRUCT TEMPORARY REACTION FOUNDATION AT END OF LAUNCHING PIT.

2) BEGIN ERECTING GIRDERS IN LAUNCHING PIT.

3) ERECT STEEL LAUNCHING SKID.

SUBSTRUCTURE CONTRACT

DESIGN FOR 0 DEGREE SKEW

DUAL 498.78m x 12.0m CONT. WELDED GIRDER BRIDGE w/ PRECAST JUMPSPANS

1 - 18.395 m SPAN; 5 - 92.000 m SPANS; 1 - 18.395 m SPAN

SUGGESTED SUPERSTR. ERECT. SEQ.

STATION: 338+20.657

HARDIN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - PROJECT DEVELOPMENT DIVISION

DESIGN SHEET NO. ____ OF ____ FILE NO. 29212 DESIGN NO. 199

DESIGNED BY DMR CHECKED BY DMR
DETAILED BY MBG CADD FILE

HARDIN COUNTY | PROJECT NUMBER

| STATE | FHWA REGION | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| IOWA | 7 | | | |